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10/518,973	07/29/2005	Takayuki Miura	SONYJP 3.3-373	2910

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/518,973	MIURA ET AL.
	Examiner	Art Unit
	Matthew B. Smithers	2437

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS,
WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>21 December 2004</u>.

2a)☐ This action is **FINAL**.　　2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-19</u> is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-19</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>21 December 2004</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☐ All　b)☒ Some * c)☐ None of:

　　　　1.☒ Certified copies of the priority documents have been received.

　　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
　　　　　　application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>12/21/04</u>.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

The information disclosure statement filed December 21, 2004 has been placed in the application file and the information referred to therein has been considered as to the merits.

Priority

Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Japan on April 21, 2003. It is noted, however, that applicant has not filed a certified copy of the P2003-115755 application as required by 35 U.S.C. 119(b).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-19 are rejected under 35 U.S.C. 102(e) as being anticipated by US 7,317,798 granted to Saito

The applied reference has a common assignee with the instant application.
Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art
under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome
either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in
the reference was derived from the inventor of this application and is thus not the
invention "by another," or by an appropriate showing under 37 CFR 1.131.

Regarding claim 1, Saito meets the claimed limitations as follows:
"A device authentication system comprising a terminal device including confidential
information for device authentication and an authentication server for granting device
authentication to the terminal device using the confidential information, wherein the
terminal device acquires a random number and generates a conversion value by
converting a set of the acquired random number and the confidential information using a
one-way function; the authentication server acquires the random number acquired by
the terminal device, the confidential information of the terminal device, and the
conversion value generated by the terminal device; a conversion value is generated by
converting the set of the acquired random number and the confidential information using
the same one-way function as that used by the terminal device; and the conversion
value generated by the terminal device is compared with the conversion value
generated by the authentication server." see column 13, line 14 to column 14, line 7 and
Figures 18 and 19.

Regarding claim 2, Saito meets the claimed limitations as follows:

"The terminal device that is granted device authentication in the device authentication system according to claim 1, comprising: reception means for receiving from the authentication server a random number and random-number identification information for identifying the random number; conversion means for generating a conversion value by converting a set of the received random number and the confidential information using a one-way function; and transmission means for transmitting the generated conversion value, the received random-number identification information, and confidential-information identification information for identifying the confidential information in the authentication server." see column 13, line 14 to column 14, line 7 and Figures 18 and 19.

Regarding claim 3, Saito meets the claimed limitations as follows:

"The authentication server for granting device authentication to the terminal device according to claim 2, comprising: random-number acquisition means for acquiring a random number; transmission means for transmitting to the terminal device the acquired random number and random-number identification information for identifying the random number; reception means for receiving from the terminal device a conversion value, the random-number identification information, and confidential-information identification information; random-number identification means for identifying the random number transmitted to the terminal device using the received random-number identification information; confidential-information identification means for identifying the confidential information of the device terminal using the received confidential-information identification information; conversion means for generating a conversion

value by converting a set of the identified confidential information and the random

number using the same one-way function as that used by the terminal device; and

device authentication means for granting device authentication to the terminal device

using the received conversion value and the generated conversion value." see column

13, line 14 to column 14, line 7 and Figures 18 and 19.

       Regarding claim 4, Saito meets the claimed limitations as follows:

"A service server included in the device authentication system according to claim 1, the

service server providing a service to the terminal device via device authentication by the

authentication server, the service server comprising: random-number acquisition means

for acquiring a random number; random-number transmission means for transmitting

the acquired random number to the terminal device; reception means for receiving from

the terminal device a conversion value generated using the confidential information and

confidential-information identification information; random-number identification means

for identifying the random number transmitted to the terminal device; authentication-

information transmission means for transmitting, to the authentication server,

authentication information including the received conversion value, the confidential-

information identification information, and the identified random number; and

authentication-result reception means for receiving from the authentication server a

result of authentication based on the transmitted authentication information." see

column 13, line 14 to column 14, line 26; column 18, line 30 to column 19, line 4;

column 19, line 35 to column 20, line 28 and Figures 18, 19, 21 and 22.

       Regarding claim 5, Saito meets the claimed limitations as follows:

"The terminal device receiving a service from the service server according to claim 4,

comprising: random-number reception means for receiving a random number from the

service server; conversion means for generating a conversion value by converting a set

of the received random number and the confidential information by the use of a one-way

function; and transmission means for transmitting the generated conversion value and

confidential-information identification information for identifying the confidential

information in the authentication server." see column 13, line 14 to column 14, line 26;

column 18, line 30 to column 19, line 4; column 19, line 35 to column 20, line 28 and

Figures 18, 19, 21 and 22.

Regarding claim 6, Saito meets the claimed limitations as follows:

"The authentication server for granting device authentication to the device terminal

when the service server according to claim 4 provides a service, the authentication

server comprising: reception means for receiving, from the service server,

authentication information including a conversion value, confidential-information

identification information, and a random number; confidential-information identification

means for identifying the confidential information of the terminal device by the use of the

received confidential-information identification information; conversion means for

generating a conversion value by converting a set of the received random number and

the identified confidential information by the use of the same one-way function as that

used by the terminal device; and device authentication means for granting device

authenticating to the terminal device by the use of the received conversion value and

the generated conversion value." see column 13, line 14 to column 14, line 26; column

18, line 30 to column 19, line 4; column 19, line 35 to column 20, line 28 and Figures 18,

19, 21 and 22.

Regarding claim 7, Saito meets the claimed limitations as follows:

"A terminal device method used by the terminal device that is granted device

authentication in the device authentication system according to claim 1, the terminal

device including a computer having reception means, conversion means, and

transmission means, the terminal device method comprising: a reception step of

receiving from the authentication server a random number and random-number

identification information for identifying the random number by the reception means; a

conversion step of generating a conversion value by converting a set of the received

random number and the confidential information using a one-way function by the

conversion means; and a transmission step of transmitting the generated conversion

value, the received random-number identification information, and confidential-

information identification information for identifying the confidential information in the

authentication server by the transmission means." see column 13, line 14 to column 14,

line 7 and Figures 18 and 19.

Regarding claim 8, Saito meets the claimed limitations as follows:

"An authentication method used by the authentication server for granting device

authentication to the terminal device according to claim 2, the authentication server

including a computer having random-number acquisition means, transmission means,

reception means, random-number identification means, confidential-information

identification means, conversion means, and device authentication means, the

authentication method comprising: a random-number acquisition step of acquiring a random number by the random-number acquisition means; a transmission step of transmitting to the terminal device the acquired random number and random-number identification information for identifying the random number by the transmission means; a reception step of receiving from the terminal device a conversion value, the random-number identification information, and confidential-information identification information by the reception means; a random-number identification step of identifying the random number transmitted to the terminal device using the received random-number identification information by the random-number identification means; a confidential-information identification step of identifying the confidential information of the device terminal using the received confidential-information identification information by the confidential-information identification means; a conversion step of generating a conversion value by converting a set of the identified confidential information and the random number using the same one-way function as that used by the terminal device by the conversion means; and a device authentication step of granting device authentication to the terminal device using the received conversion value and the generated conversion value by the device authentication means." see column 13, line 14 to column 14, line 7 and Figures 18 and 19.

Regarding claim 9, Saito meets the claimed limitations as follows:

"An authentication method used by the service server according to claim 4, the service server including a computer having random-number acquisition means, random-number transmission means, reception means, random-number identification means,

authentication-information transmission means, and authentication-result reception means, the authentication method comprising: a random-number acquisition step of acquiring a random number by the random-number acquisition means; a random-number transmission step of transmitting the acquired random number to the terminal device by the random-number transmission means; a reception step of receiving from the terminal device a conversion value generated using the confidential information and confidential-information identification information by the reception means; a random-number identification step of identifying the random number transmitted to the terminal device by the random-number identification means; an authentication-information transmission step of transmitting, to the authentication server, authentication information including the received conversion value, the confidential-information identification information, and the identified random number by the authentication-information transmission means; and an authentication-result reception step of receiving from the authentication server a result of authentication based on the transmitted authentication information by the authentication-result reception means." see column 13, line 14 to column 14, line 26; column 18, line 30 to column 19, line 4; column 19, line 35 to column 20, line 28 and Figures 18, 19, 21 and 22.

Regarding claim 10, Saito meets the claimed limitations as follows:
"A terminal device method used by the terminal device receiving a service from the service server according to claim 4, the terminal device including a computer having random-number reception means, conversion means, and transmission means, the terminal device method comprising: a random-number reception step of receiving a

random number from the service server by the random-number reception means; a

conversion step of generating a conversion value by converting a set of the received

random number and the confidential information by the use of a one-way function by the

conversion means; and a transmission step of transmitting the generated conversion

value and confidential-information identification information for identifying the

confidential information in the authentication server by the transmission means." see

column 13, line 14 to column 14, line 26; column 18, line 30 to column 19, line 4;

column 19, line 35 to column 20, line 28 and Figures 18, 19, 21 and 22.

  Regarding claim 11, Saito meets the claimed limitations as follows:

"An authentication method used by the authentication server for granting device

authentication to the device terminal when the service server according to claim 4

provides a service, the authentication server including a computer having reception

means, confidential-information identification means, conversion means, and device

authentication means, the authentication method comprising: a reception step of

receiving, from the service server, authentication information including a conversion

value, confidential-information identification information, and a random number by the

reception means; a confidential-information identification step of identifying the

confidential information of the terminal device by the use of the received confidential-

information identification information by the confidential-information identification

means; a conversion step of generating a conversion value by converting a set of the

received random number and the identified confidential information by the use of the

same one-way function as that used by the terminal device by the conversion means;

and a device authentication step of granting device authenticating to the terminal device

by the use of the received conversion value and the generated conversion value by the

device authentication means." see column 13, line 14 to column 14, line 26; column 18,

line 30 to column 19, line 4; column 19, line 35 to column 20, line 28 and Figures 18, 19,

21 and 22.

  Regarding claim 12, Saito meets the claimed limitations as follows:

"A terminal device program in the terminal device that is granted device authentication

in the device authentication system according to claim 1, the terminal device including a

computer, the terminal device program realizing: a reception function for receiving from

the authentication server a random number and random-number identification

information for identifying the random number; a conversion function for generating a

conversion value by converting a set of the received random number and the

confidential information using a one-way function; and a transmission function for

transmitting the generated conversion value, the received random-number identification

information, and confidential-information identification information for identifying the

confidential information in the authentication server." see column 13, line 14 to column

14, line 7 and Figures 18 and 19.

  Regarding claim 13, Saito meets the claimed limitations as follows:

"An authentication program in the authentication server for granting device

authentication to the terminal device according to claim 2, the authentication server

including a computer, the authentication program realizing: a random-number

acquisition function for acquiring a random number; a transmission function for

transmitting to the terminal device the acquired random number and random-number identification information for identifying the random number; a reception function for receiving from the terminal device a conversion value, the random-number identification information, and confidential-information identification information; a random-number identification function for identifying the random number transmitted to the terminal device using the received random-number identification information; a confidential-information identification function for identifying the confidential information of the device terminal using the received confidential-information identification information; a conversion function for generating a conversion value by converting a set of the identified confidential information and the random number using the same one-way function as that used by the terminal device; and a device authentication function for granting device authentication to the terminal device using the received conversion value and the generated conversion value." see column 13, line 14 to column 14, line 7 and Figures 18 and 19.

Regarding claim 14, Saito meets the claimed limitations as follows:
"A service server program in the service server according to claim 4, the service server including a computer, the service server program realizing: a random-number acquisition function for acquiring a random number; a random-number transmission function for transmitting the acquired random number to the terminal device; a reception function for receiving from the terminal device a conversion value generated using the confidential information and confidential-information identification information; a random-number identification function for identifying the random number transmitted to

the terminal device; an authentication-information transmission function for transmitting,

to the authentication server, authentication information including the received

conversion value, the confidential-information identification information, and the

identified random number; and an authentication-result reception function for receiving

from the authentication server a result of authentication based on the transmitted

authentication information." see column 13, line 14 to column 14, line 26; column 18,

line 30 to column 19, line 4; column 19, line 35 to column 20, line 28 and Figures 18, 19,

21 and 22.

Regarding claim 15, Saito meets the claimed limitations as follows:

"A terminal device program in the terminal device receiving a service from the service

server according to claim 4, the terminal device including a computer, the terminal

device program realizing: a random-number reception function for receiving a random

number from the service server; a conversion function for generating a conversion value

by converting a set of the received random number and the confidential information by

the use of a one-way function; and a transmission function for transmitting the

generated conversion value and confidential-information identification information for

identifying the confidential information in the authentication server." see column 13, line

14 to column 14, line 26; column 18, line 30 to column 19, line 4; column 19, line 35 to

column 20, line 28 and Figures 18, 19, 21 and 22.

Regarding claim 16, Saito meets the claimed limitations as follows:

"An authentication program in the authentication server for granting device

authentication to the device terminal when the service server according to claim 4

provides a service, the authentication server including a computer, the authentication

program realizing: a reception function for receiving, from the service server,

authentication information including a conversion value, confidential-information

identification information, and a random number; a confidential-information identification

function for identifying the confidential information of the terminal device by the use of

the received confidential-information identification information; a conversion function for

generating a conversion value by converting a set of the received random number and

the identified confidential information by the use of the same one-way function as that

used by the terminal device; and a device authentication function for granting device

authenticating to the terminal device by the use of the received conversion value and

the generated conversion value." see column 13, line 14 to column 14, line 26; column

18, line 30 to column 19, line 4; column 19, line 35 to column 20, line 28 and Figures 18,

19, 21 and 22.

Regarding claim 17, Saito meets the claimed limitations as follows:

"A computer-readable recording medium including the device terminal program

according to claim 12 or claim 15." see column 13, line 14 to column 14, line 26; column

18, line 30 to column 19, line 4; column 19, line 35 to column 20, line 28 and Figures 18,

19, 21 and 22.

Regarding claim 18, Saito meets the claimed limitations as follows:

"A computer-readable recording medium including the authentication program according

to claim 13 or claim 16." see column 13, line 14 to column 14, line 26; column 18, line

30 to column 19, line 4; column 19, line 35 to column 20, line 28 and Figures 18, 19, 21 and 22.

Regarding claim 19, Saito meets the claimed limitations as follows:

"A computer-readable recording medium including the service server program according to claim 14." see column 13, line 14 to column 14, line 26; column 18, line 30 to column 19, line 4; column 19, line 35 to column 20, line 28 and Figures 18, 19, 21 and 22.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

A. Wakayama (US 20050144484).

B. Zilliacus et al (US 6,915,272).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew B. Smithers whose telephone number is (571) 272-3876. The examiner can normally be reached on Monday-Friday (8:00-4:30) EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Emmanuel L. Moise can be reached on (571) 272-3865. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Matthew B Smithers/
Primary Examiner, Art Unit 2437